Fig. 1

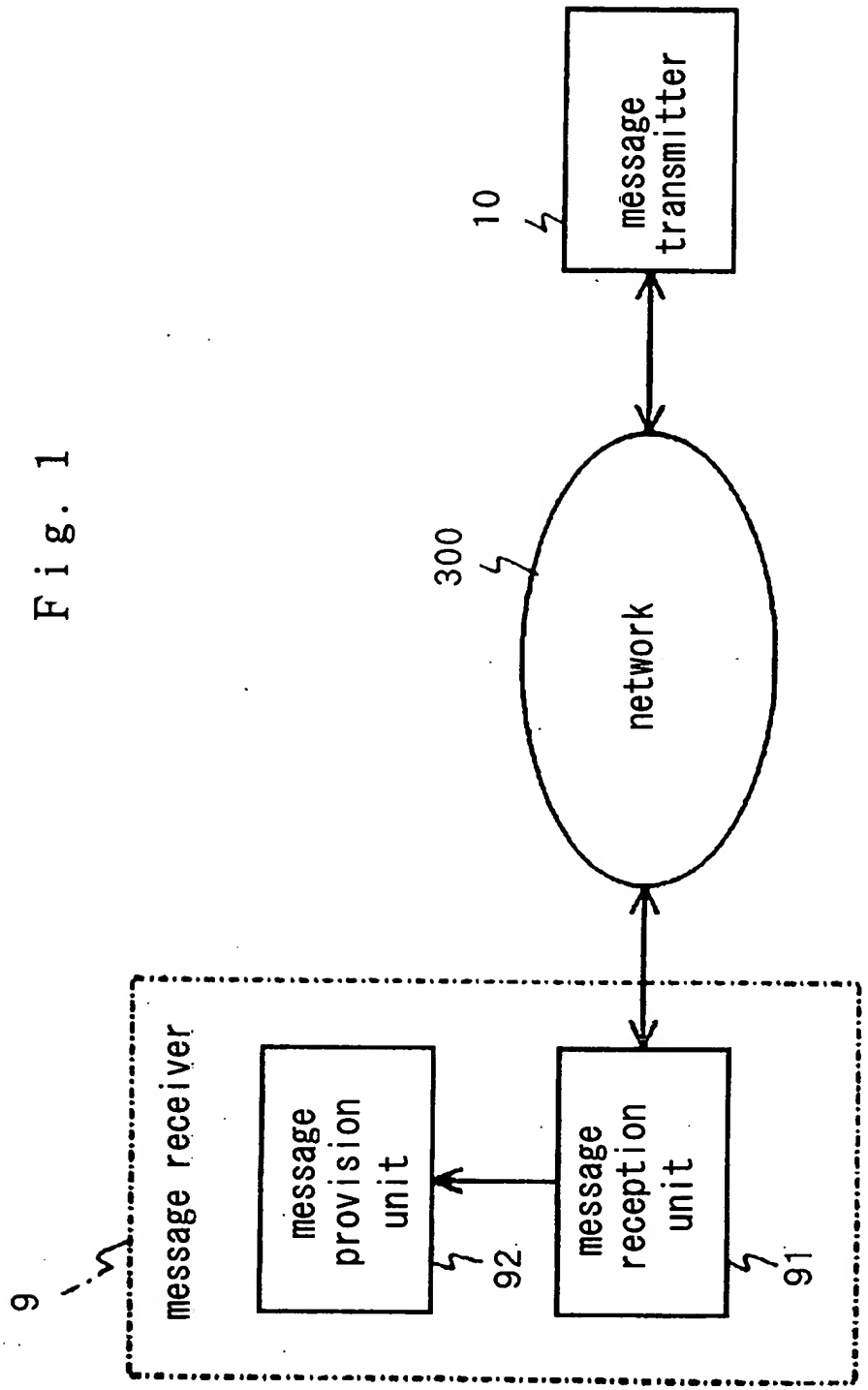

message transmitter
10
network
300
message receiver
9
message provision unit
92
message reception unit
91

Fig. 2

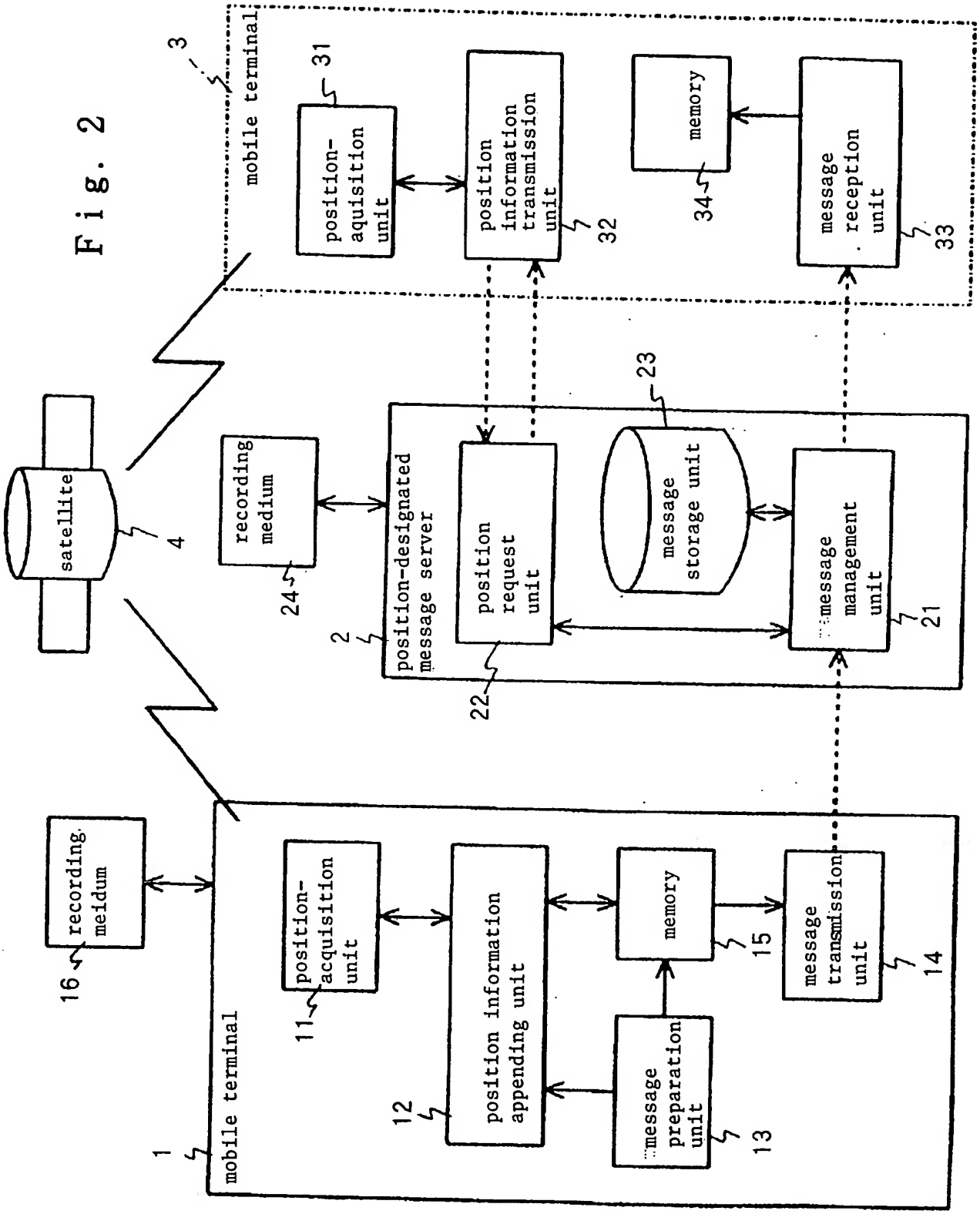

mobile terminal
3
position-aquisition unit
31
position information transmission unit
32
memory
34
message reception unit
33
satellite
4
recording medium
24
position-designated message server
2
position request unit
22
23
message storage unit
message management unit
21
recording meidum
16
mobile terminal
1
position-acquisition unit
11
position information appending unit
12
memory
15
message transmission unit
14
message preparation unit
13

Fig. 3

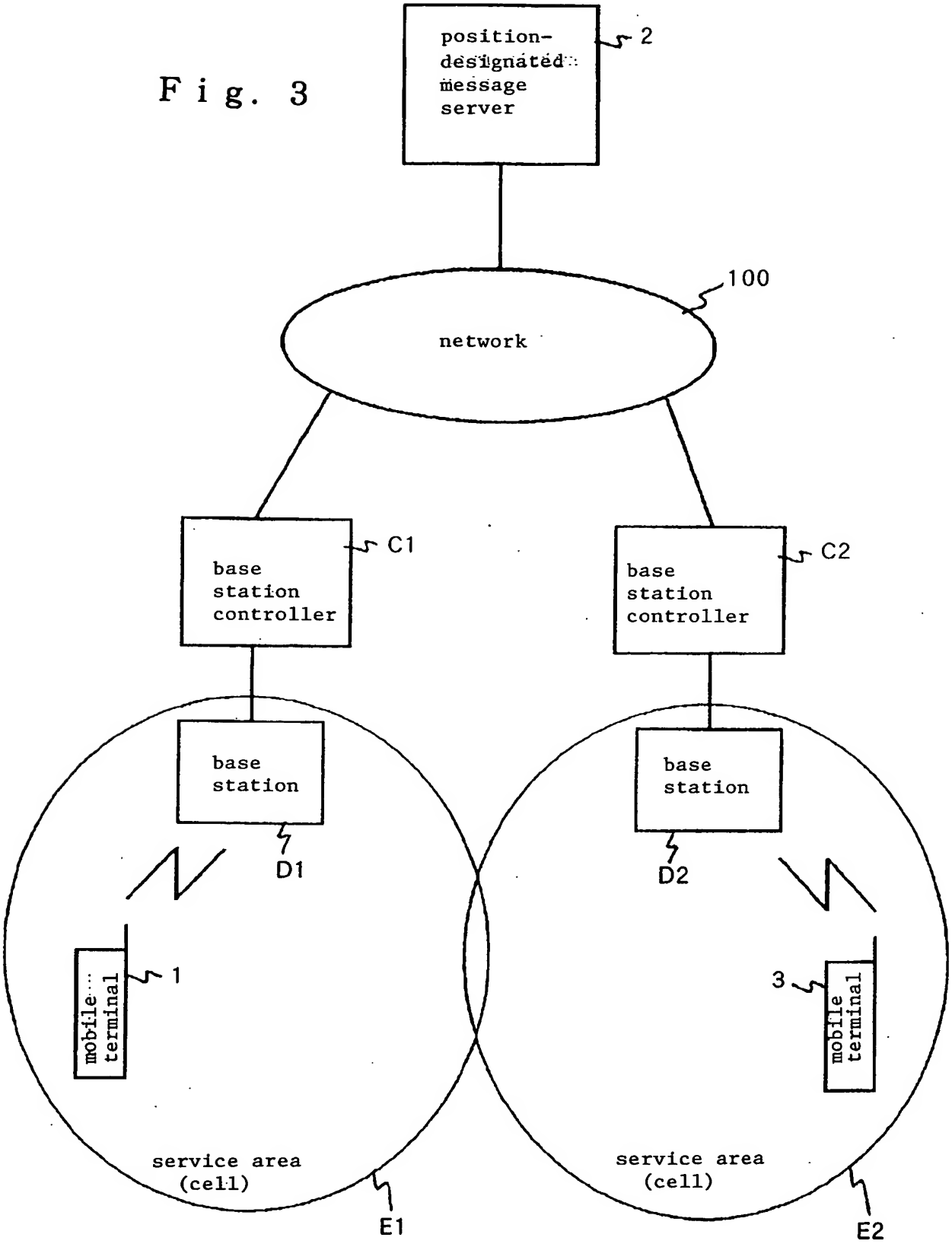

position-designated message server
2
network
100
base station controller
C1
base station controller
C2
base station
D1
base station
D2
mobile terminal
1
mobile terminal
3
service area (cell)
E1
service area (cell)
E2

Fig. 4

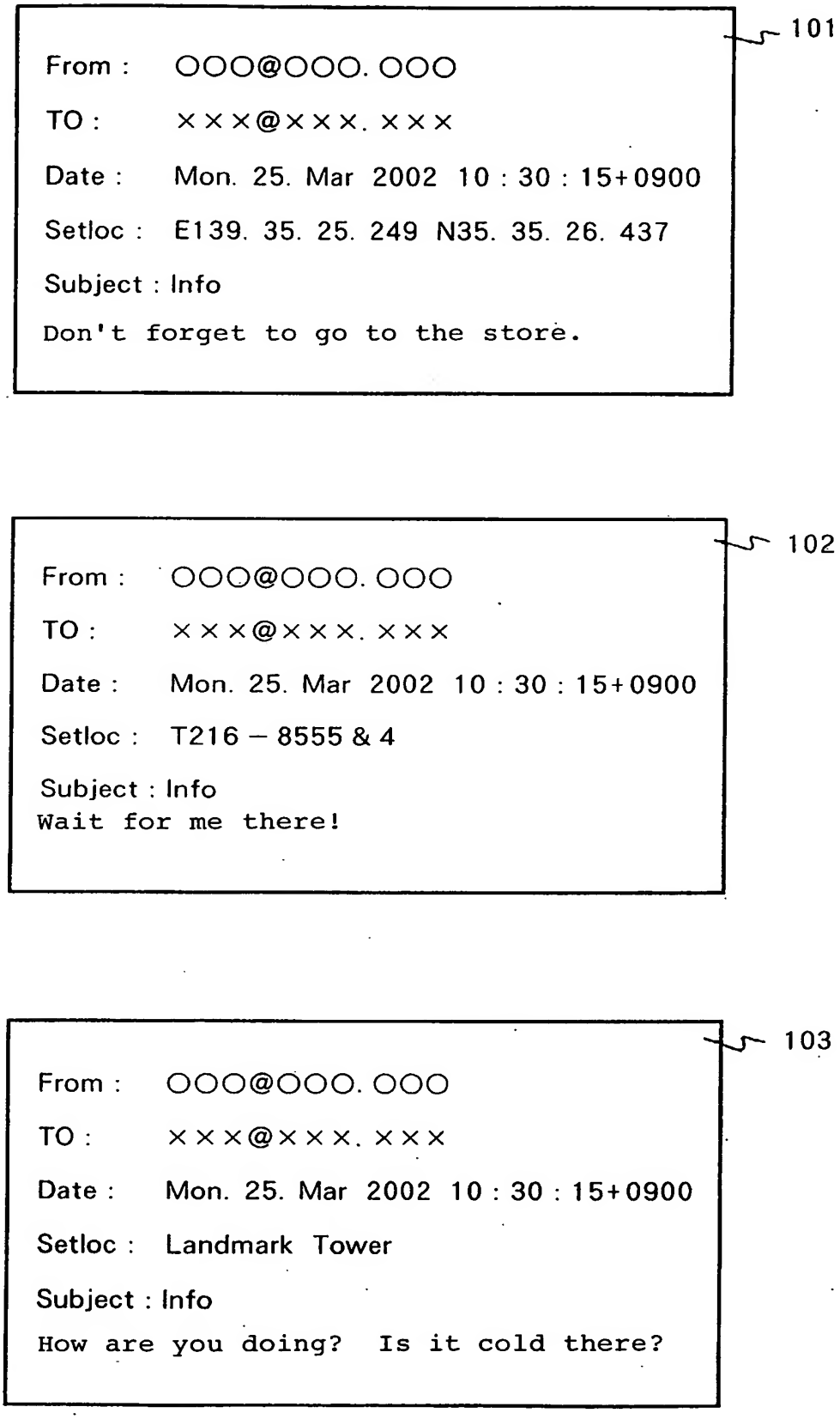

101
From : OOO@OOO. OOO
TO : ×××@×××. ×××
Date : Mon. 25. Mar 2002 10 : 30 : 15+0900
Setloc : E139. 35. 25. 249 N35. 35. 26. 437
Subject : Info
Don't forget to go to the store.
102
From : OOO@OOO. OOO
TO : ×××@×××. ×××
Date : Mon. 25. Mar 2002 10 : 30 : 15+0900
Setloc : T216 − 8555 & 4
Subject : Info
Wait for me there!
103
From : OOO@OOO. OOO
TO : ×××@×××. ×××
Date : Mon. 25. Mar 2002 10 : 30 : 15+0900
Setloc : Landmark Tower
Subject : Info
How are you doing? Is it cold there?

Fig. 5

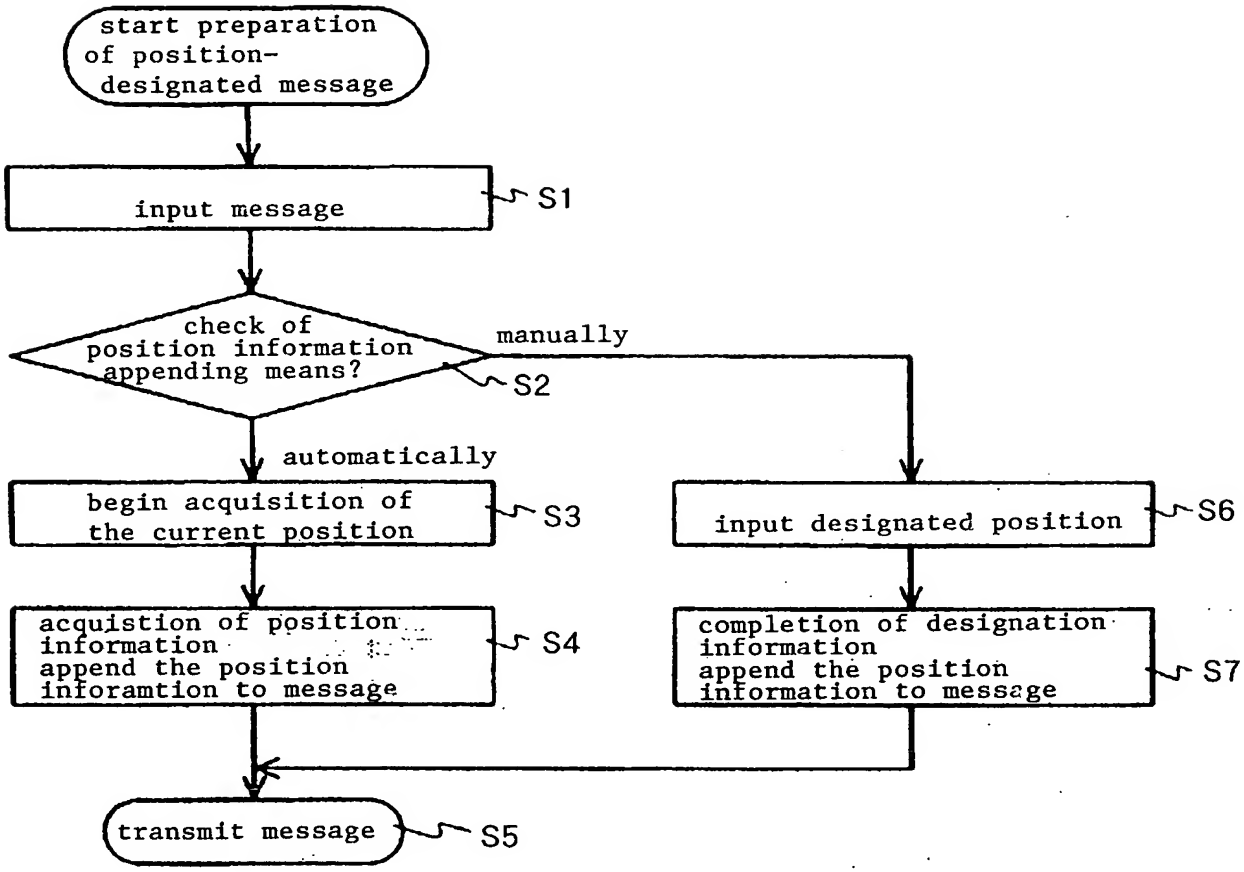

start preparation of position-designated message
input message
S1
check of position information appending means?
S2
manually
automatically
begin acquisition of the current position
S3
acquistion of position information append the position inforamtion to message
S4
input designated position
S6
completion of designation information append the position information to message
S7
transmit message
S5

Fig. 6

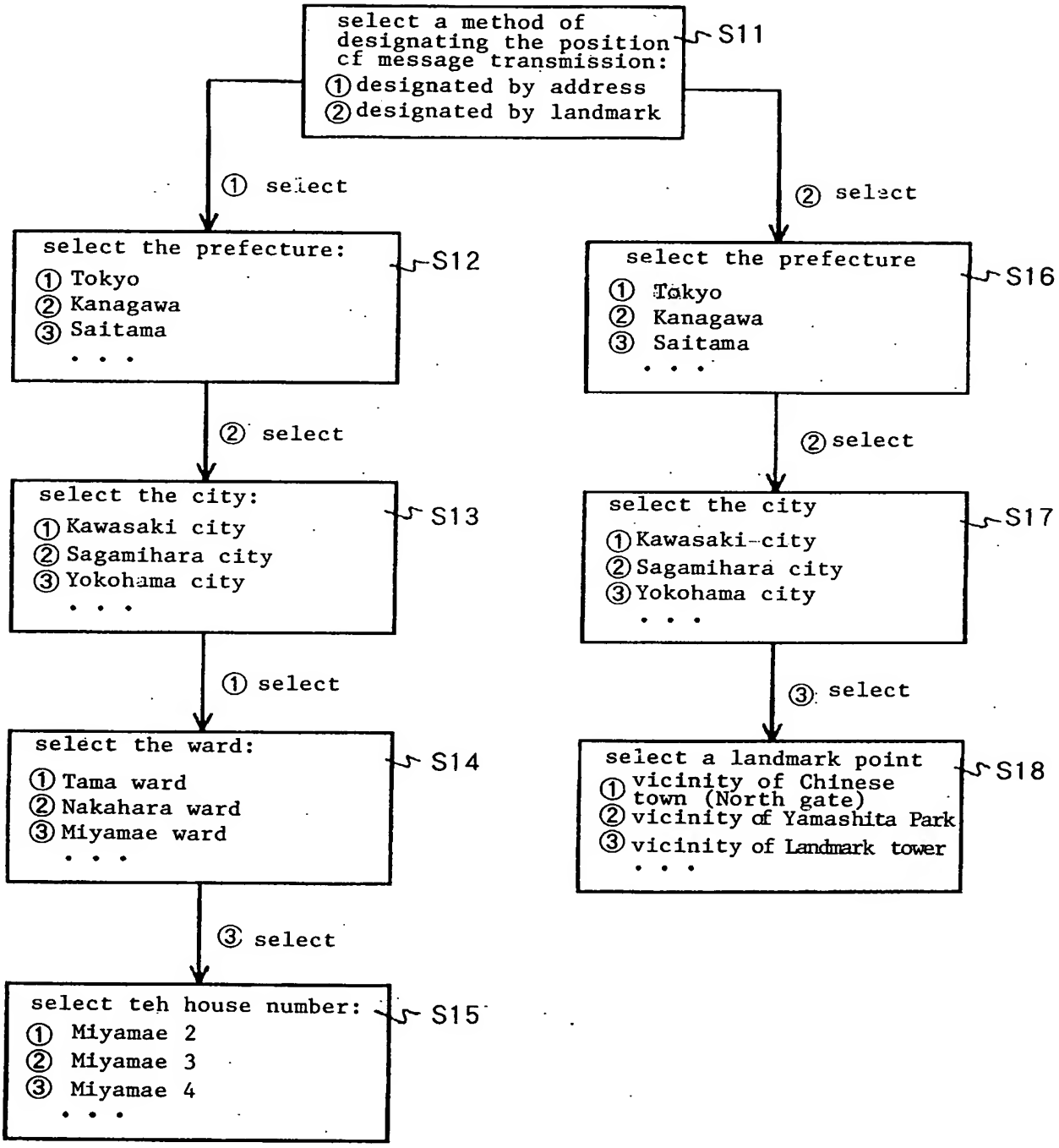

select a method of designating the position of message transmission:
①designated by address
②designated by landmark
S11
① select
② select
select the prefecture:
① Tokyo
② Kanagawa
③ Saitama
• • •
S12
select the prefecture
① Tokyo
② Kanagawa
③ Saitama
• • •
S16
② select
② select
select the city:
① Kawasaki city
② Sagamihara city
③ Yokohama city
• • •
S13
select the city
① Kawasaki-city
② Sagamihara city
③ Yokohama city
• • •
S17
① select
③ select
select the ward:
① Tama ward
② Nakahara ward
③ Miyamae ward
• • •
S14
select a landmark point
① vicinity of Chinese town (North gate)
② vicinity of Yamashita Park
③ vicinity of Landmark tower
• • •
S18
③ select
select teh house number:
① Miyamae 2
② Miyamae 3
③ Miyamae 4
• • •
S15

Fig. 7

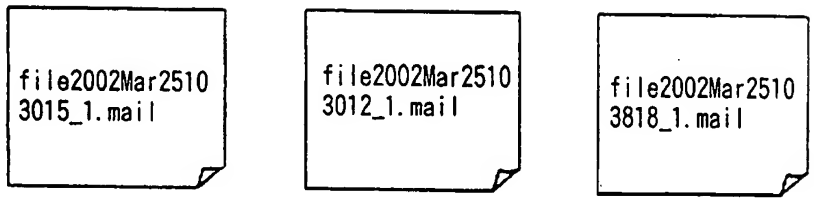
(a)

To	From	Date	transmission position, effect range	Title	mail content
yamada@aaa.aaa.aaa	abe@ddd.ddd.ddd	Mon. 25 Mar 2002 10:30:15+0900	N35.35.26.47E139.35.25.24.200m	Info	Don't forget to go to the store.
sato@bbb.bbb.bbb	ito@eee.eee.eee	Mon. 25 Mar 2002 10:35:12+0900	216-8555&4.50m	Info	Wait for me there!
kato@ccc.ccc.ccc	eda@fff.fff.fff	Mon. 25 Mar 2002 10:38:18+0900	Landmark Tower.100m	Info	How are you doing? Is it cold there?

(b)

To	transmisstion position, effect range	Date	message body
yamada@aaa.aaa.aaa	N35.35.26.47E139.35.25.24.200m	Mon. 25 Mar2002 10:30:15+0900	file2002Mar25103015_1.mail
sato@bbb.bbb.bbb	216-85558&4.50m	Mon. 25 Mar2002 10:35:12+0900	file2002Mar25103512_1.mail
kato@ccc.ccc.ccc	Landmark Tower.100m	Mon. 25 Mar2002 10:38:18+0900	file2002Mar25103818_1.mail

(c)



JP2003189171

Fig. 8

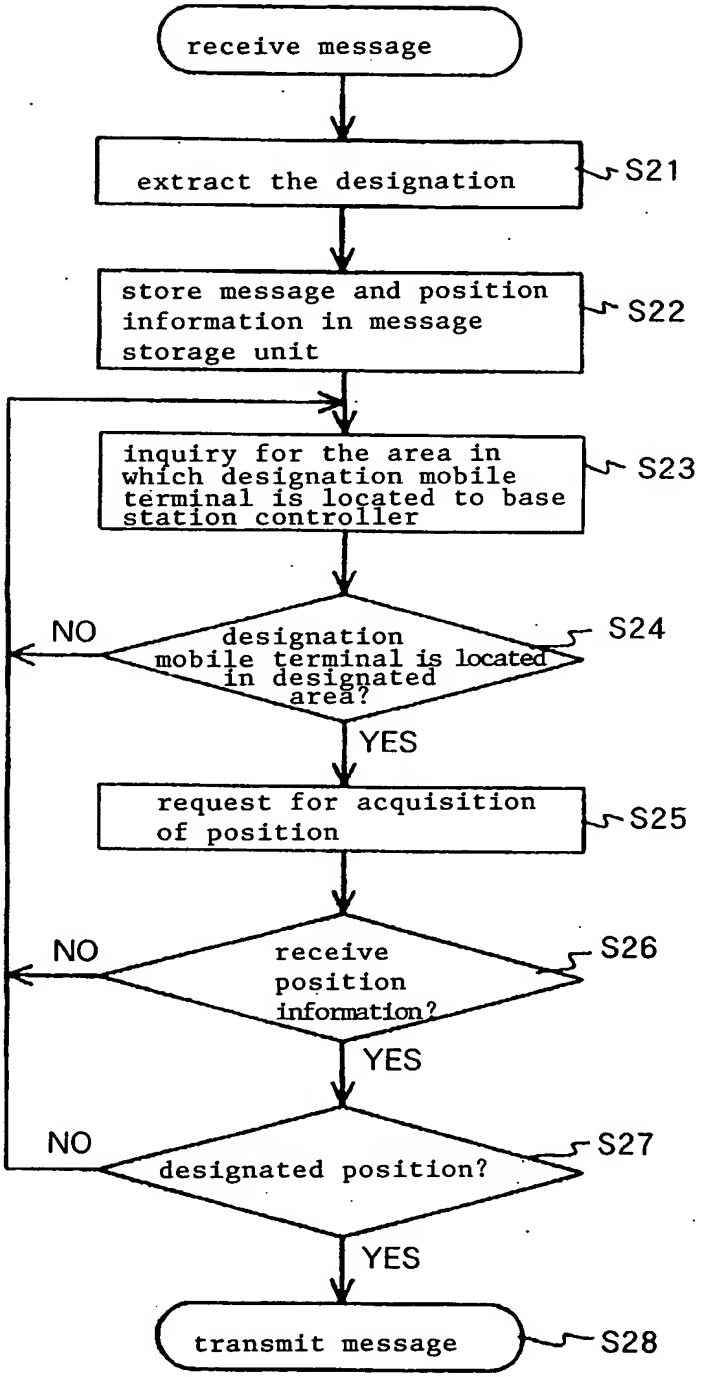

receive message
extract the designation
S21
store message and position information in message storage unit
S22
inquiry for the area in which designation mobile terminal is located to base station controller
S23
designation mobile terminal is located in designated area?
S24
NO
YES
request for acquisition of position
S25
receive position information?
S26
NO
YES
designated position?
S27
NO
YES
transmit message
S28

Fig. 9

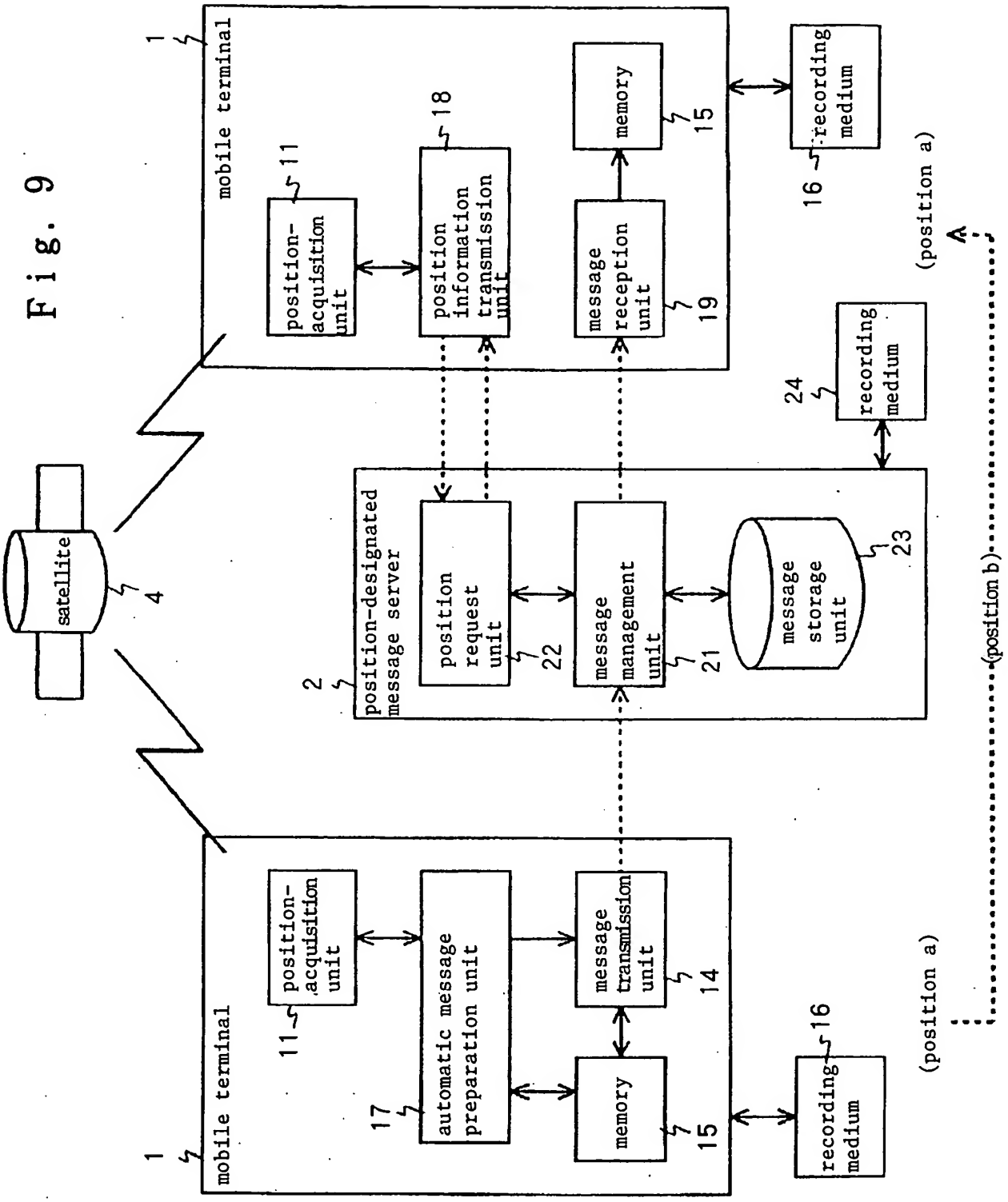

mobile terminal
1
position-acquisition unit
11
position information transmission unit
18
memory
15
recording medium
16
message reception unit
19
satellite
4
position-designated message server
2
position request unit
22
message management unit
21
message storage unit
23
recording medium
24
(position a)
(position b)
automatic message preparation unit
17
message transmission unit
14

Fig. 10

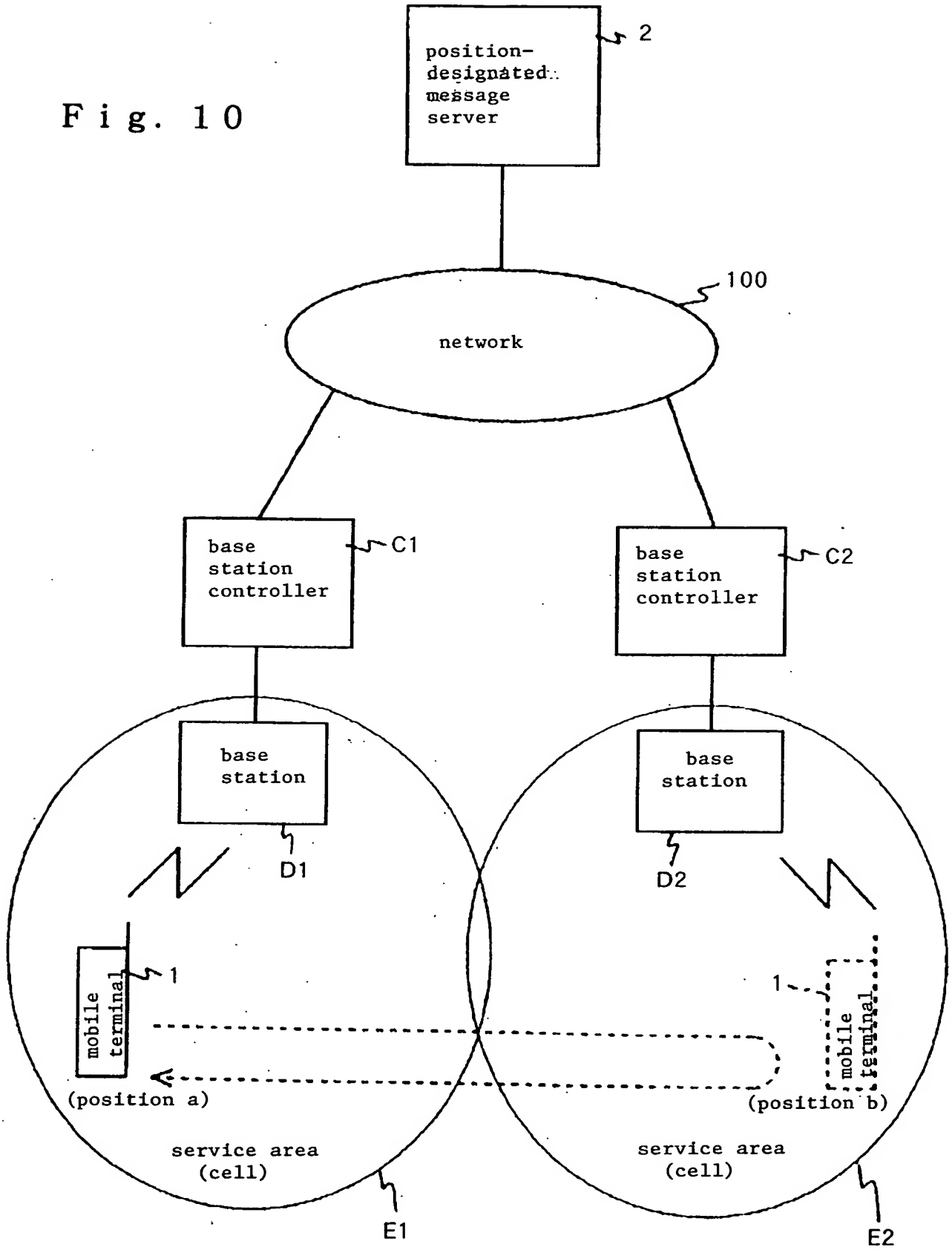

position-designated message server
2
network
100
base station controller
C1
base station controller
C2
base station
D1
base station
D2
mobile terminal
1
(position a)
mobile terminal
1
(position b)
service area (cell)
E1
service area (cell)
E2

Fig. 11

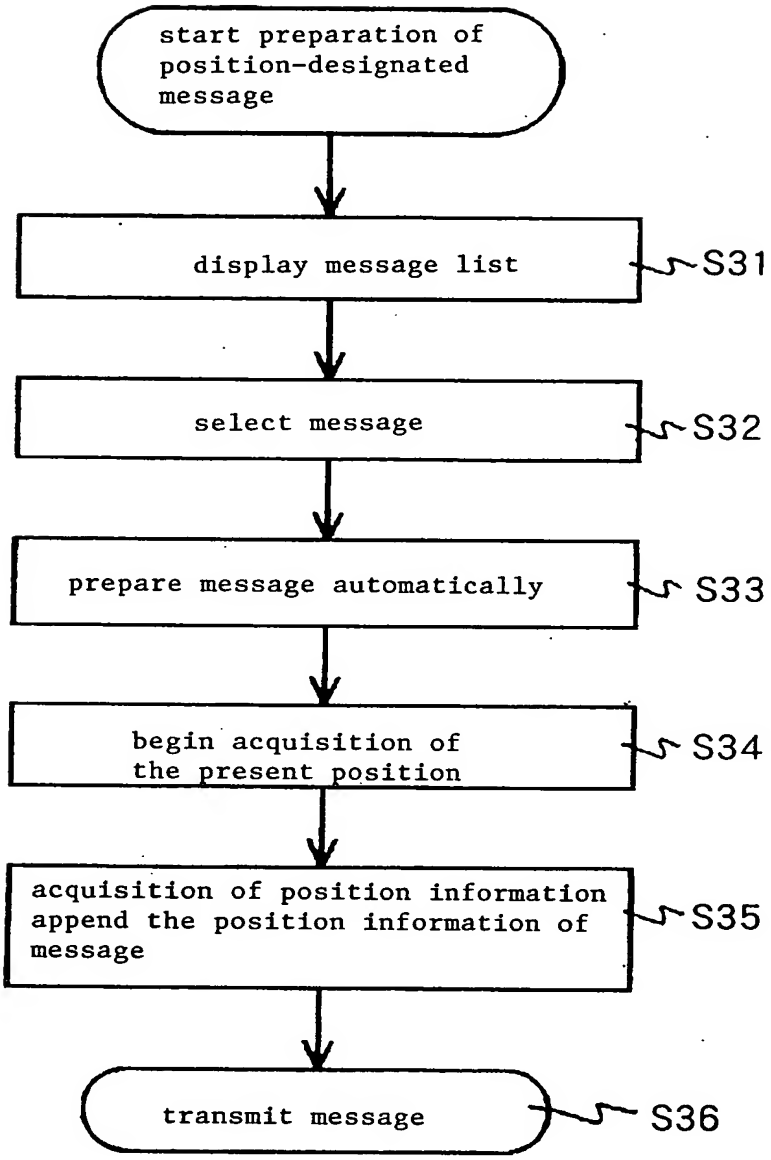

start preparation of position-designated message
display message list
S31
select message
S32
prepare message automatically
S33
begin acquisition of the present position
S34
acquisition of position information append the position information of message
S35
transmit message
S36

Fig. 12

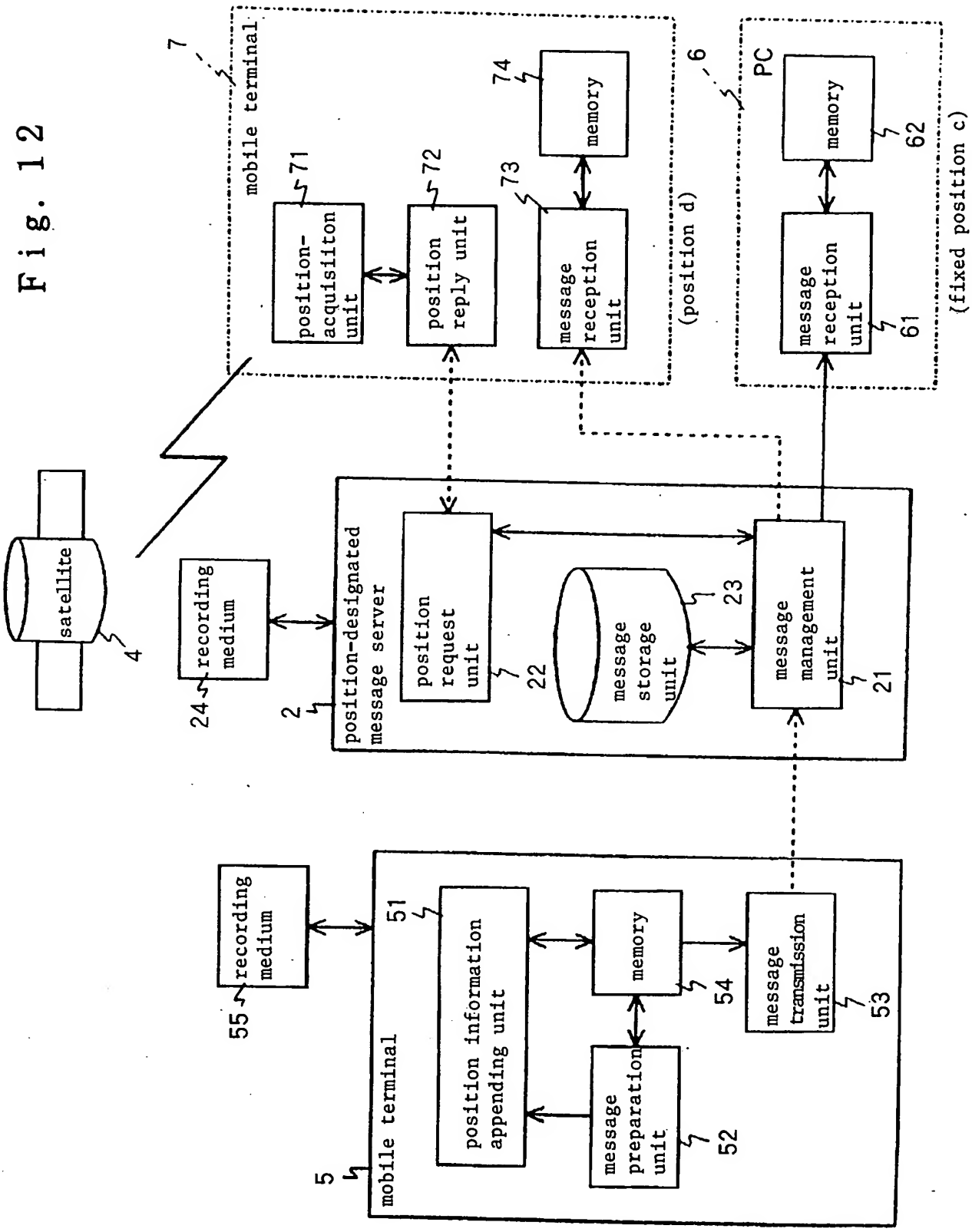

7
mobile terminal
position-acquisiton unit
71
position reply unit
72
73
message reception unit
74
memory
(position d)
6
PC
memory
62
message reception unit
61
(fixed position c)
satellite
4
recording medium
24
2
position-designated message server
position request unit
22
message storage unit
23
message management unit
21
recording medium
55
5
mobile terminal
51
position information appending unit
memory
54
message transmission unit
53
message preparation unit
52

Fig. 13

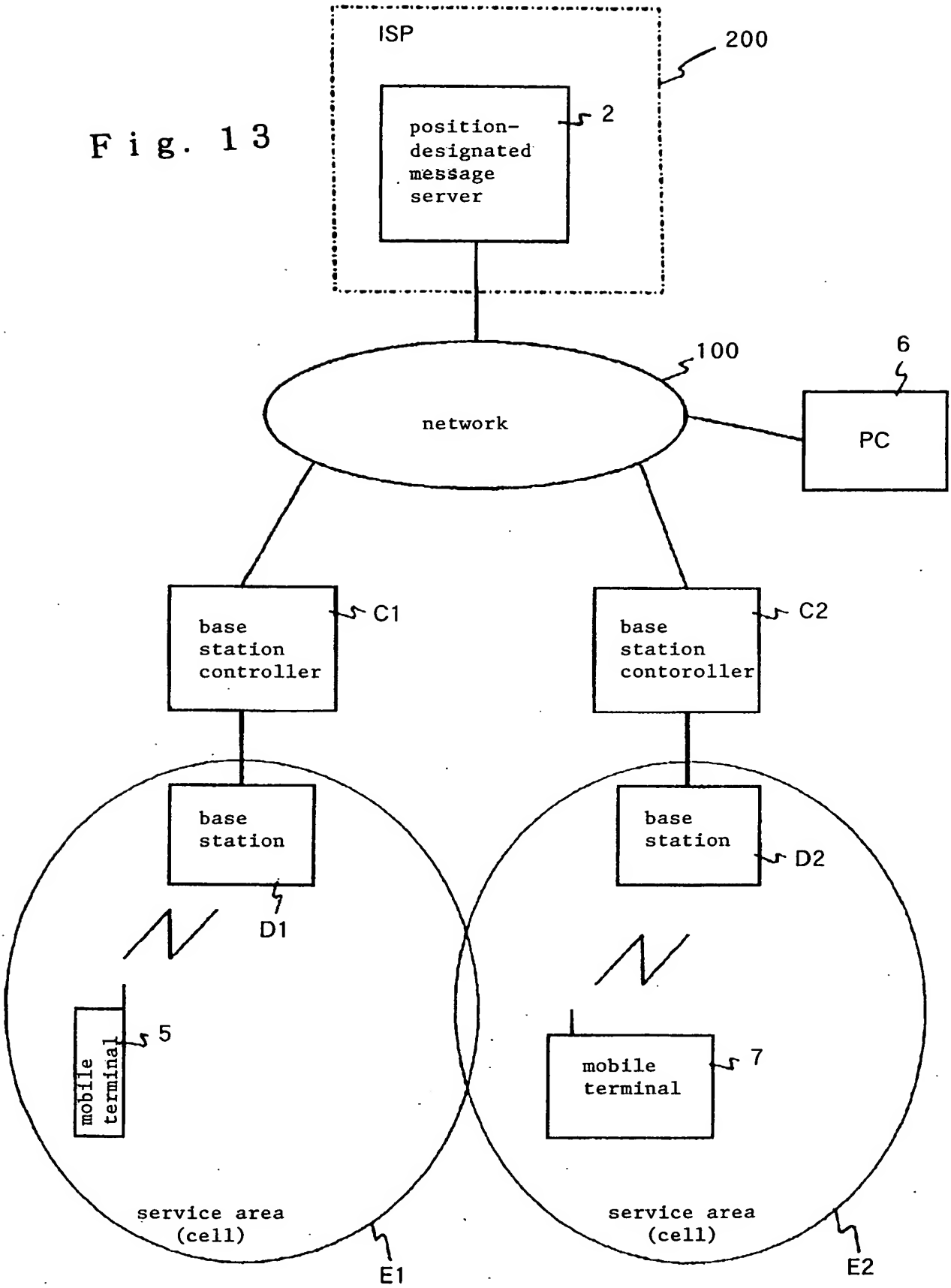

ISP
200
position-designated message server
2
network
100
PC
6
base station controller
C1
base station contoroller
C2
base station
D1
base station
D2
mobile terminal
5
mobile terminal
7
service area (cell)
E1
service area (cell)
E2

Fig. 14

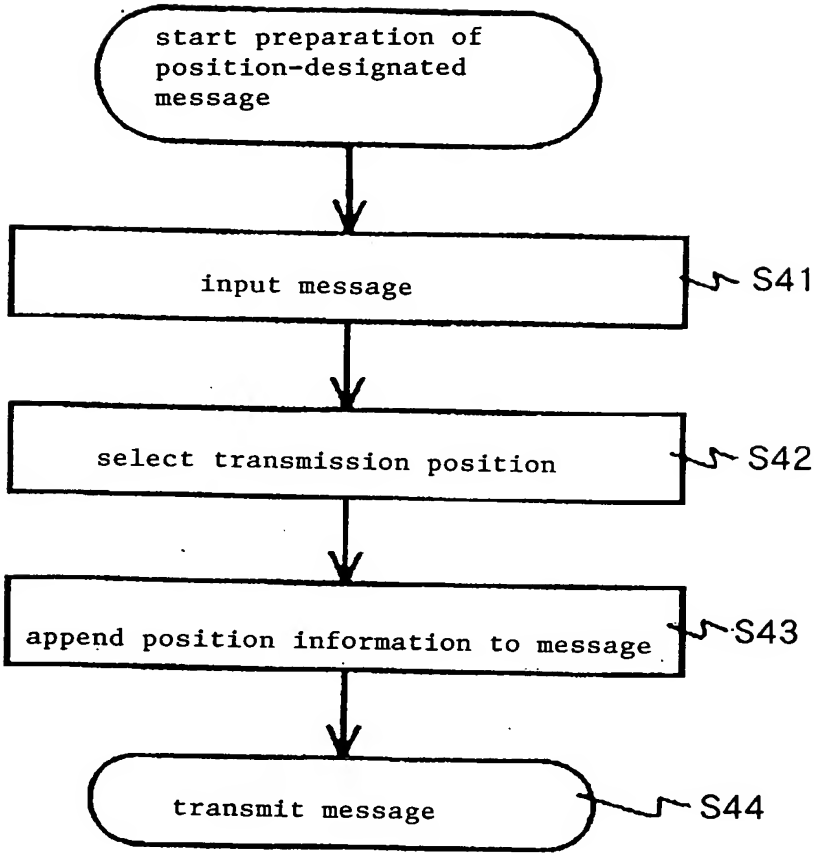

start preparation of position-designated message
input message
S41
select transmission position
S42
append position information to message
S43
transmit message
S44

Fig. 15

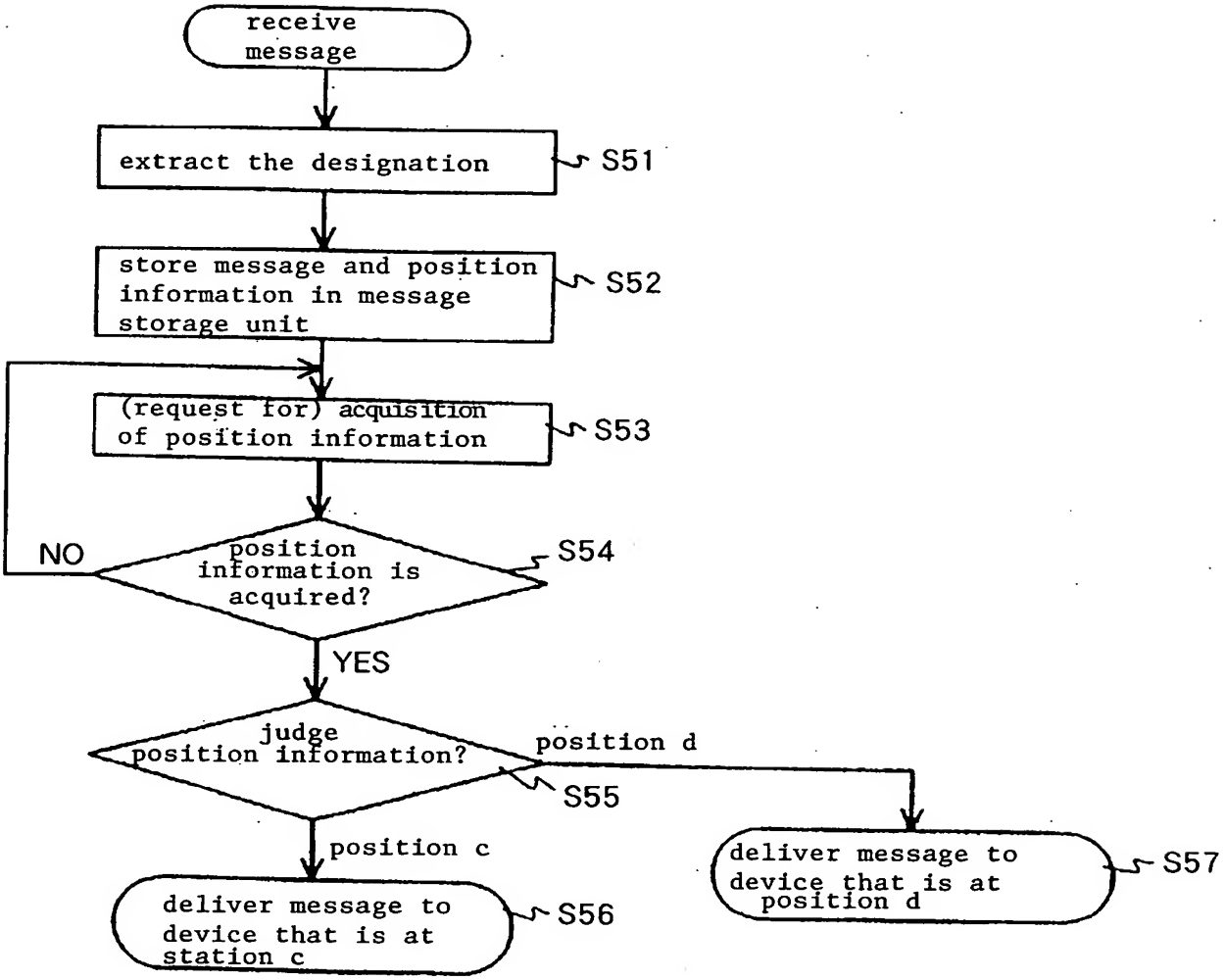

receive message
extract the designation
S51
store message and position information in message storage unit
S52
(request for) acquisition of position information
S53
NO
position information is acquired?
S54
YES
judge position information?
position d
S55
position c
deliver message to device that is at station c
S56
deliver message to device that is at position d
S57

Fig. 16

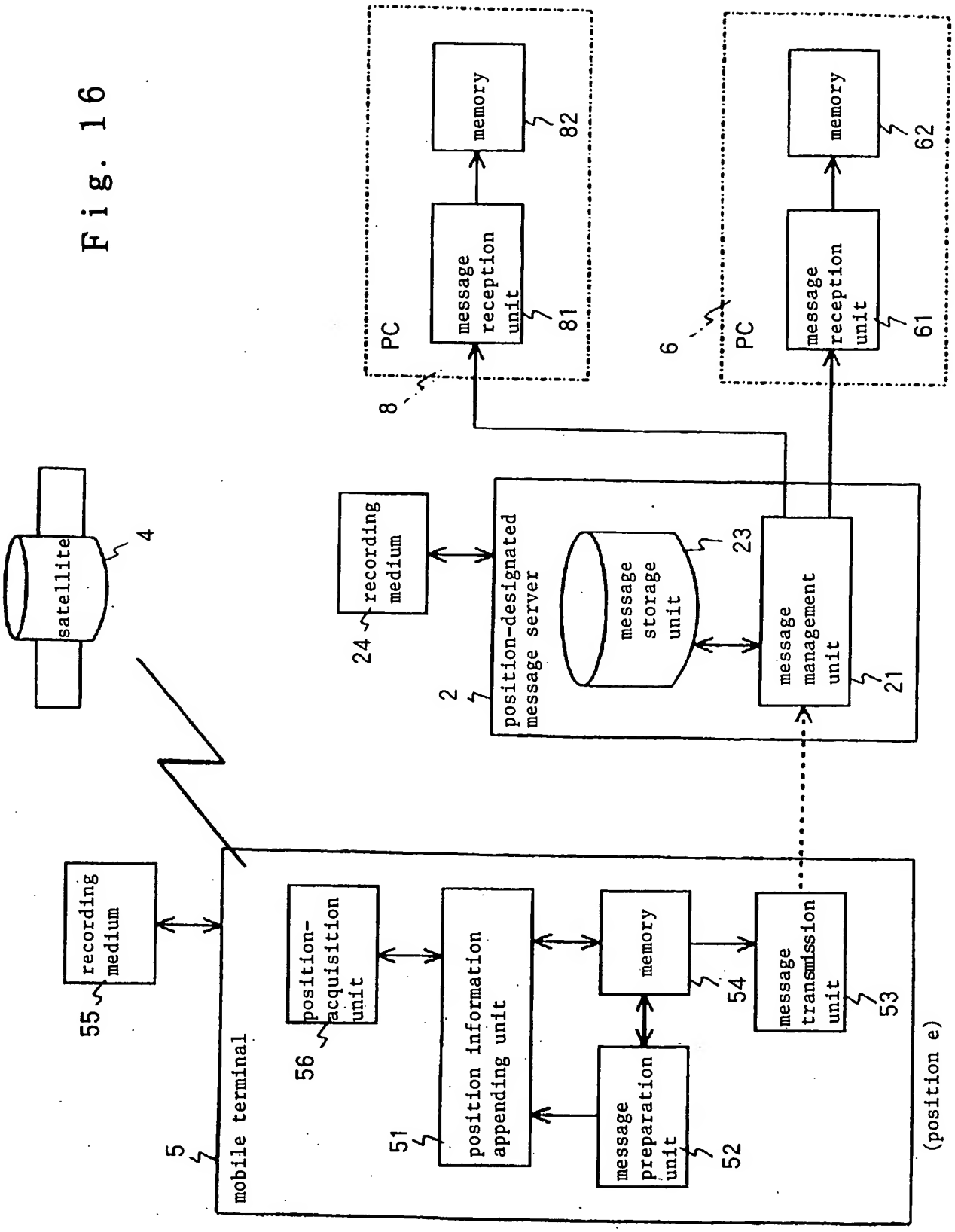

satellite
4
recording medium
55
mobile terminal
5
position-acquisition unit
56
position information appending unit
51
memory
54
message preparation unit
52
message transmission unit
53
(position e)
recording medium
24
position-designated message server
2
message storage unit
23
message management unit
21
8
PC
message reception unit
81
memory
82
6
PC
message reception unit
61
memory
62

Fig. 17

(a)

List : aaa @ aaa.aaa.aaa.list

To : aaa @ aaa.aaa.aaa

designation of position: position A = N35.35.26.47E139.35.25.24

aaa @ aaa.aaa.aaa.list

(b)

To	From	distribution list	transmission position, effective range	message body
aaa@aaa. aaa. aaa	abe@ddd. ddd. ddd	aaa@aaa. aaa. aaa. list	position A	file2002Mar25103015_1. mail
aaa@aaa. aaa. aaa	abe@ddd. ddd. ddd	aaa@aaa. aaa. aaa. list	216 − 8555 & 4, 50m	file2002Mar25103012_1. mail
aaa@aaa. aaa. aaa	abe@ddd. ddd. ddd	aaa@aaa. aaa. aaa. list	position A	file2002Mar25103818_1. mail

10/951891

Fig. 18

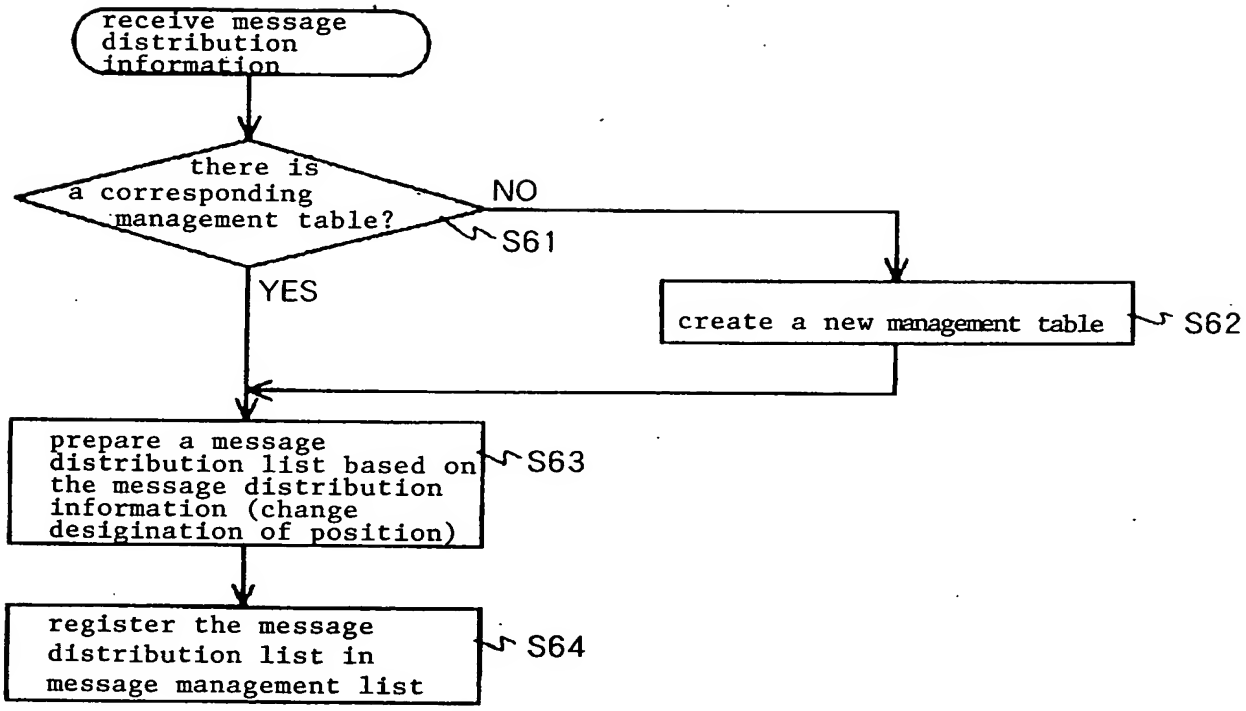

receive message distribution information
there is a corresponding management table?
NO
S61
YES
create a new management table
S62
prepare a message distribution list based on the message distribution information (change desigination of position)
S63
register the message distribution list in message management list
S64

Fig. 19

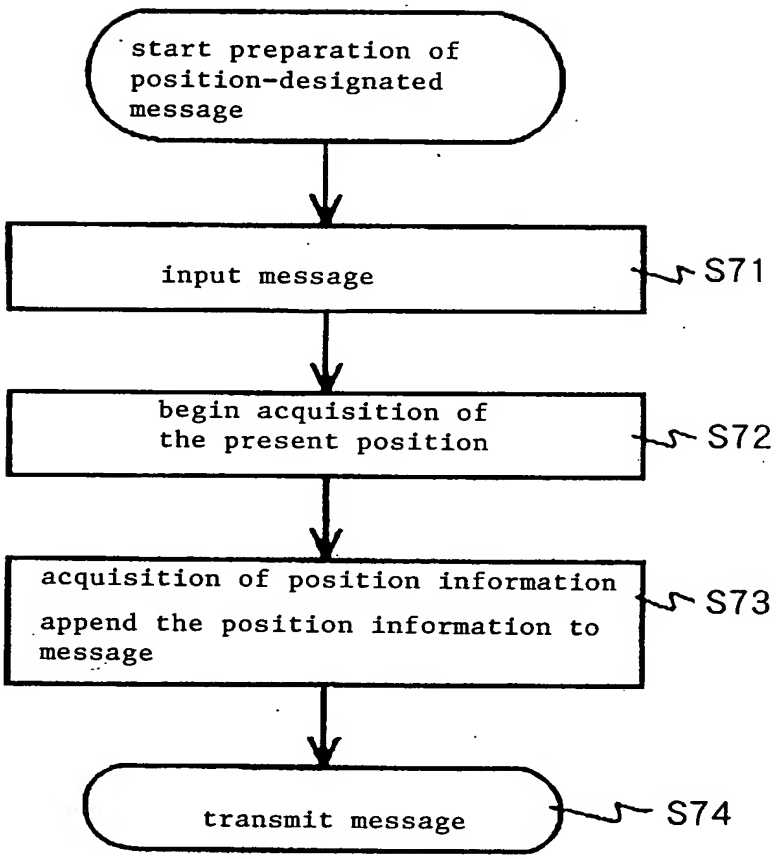

start preparation of position-designated message
input message
S71
begin acquisition of the present position
S72
acquisition of position information
append the position information to message
S73
transmit message
S74

Fig. 20

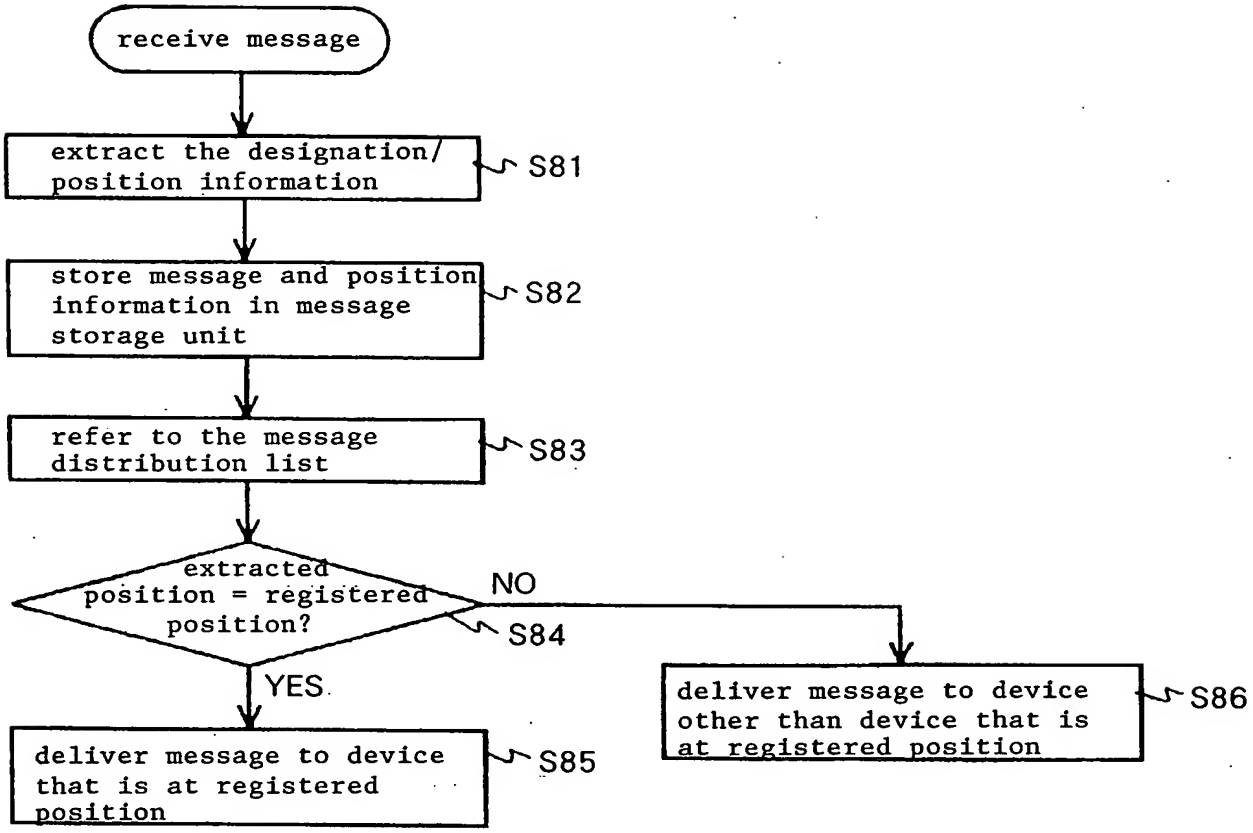

receive message
extract the designation/ position information
S81
store message and position information in message storage unit
S82
refer to the message distribution list
S83
extracted position = registered position?
S84
NO
YES
deliver message to device that is at registered position
S85
deliver message to device other than device that is at registered position
S86

Fig. 21

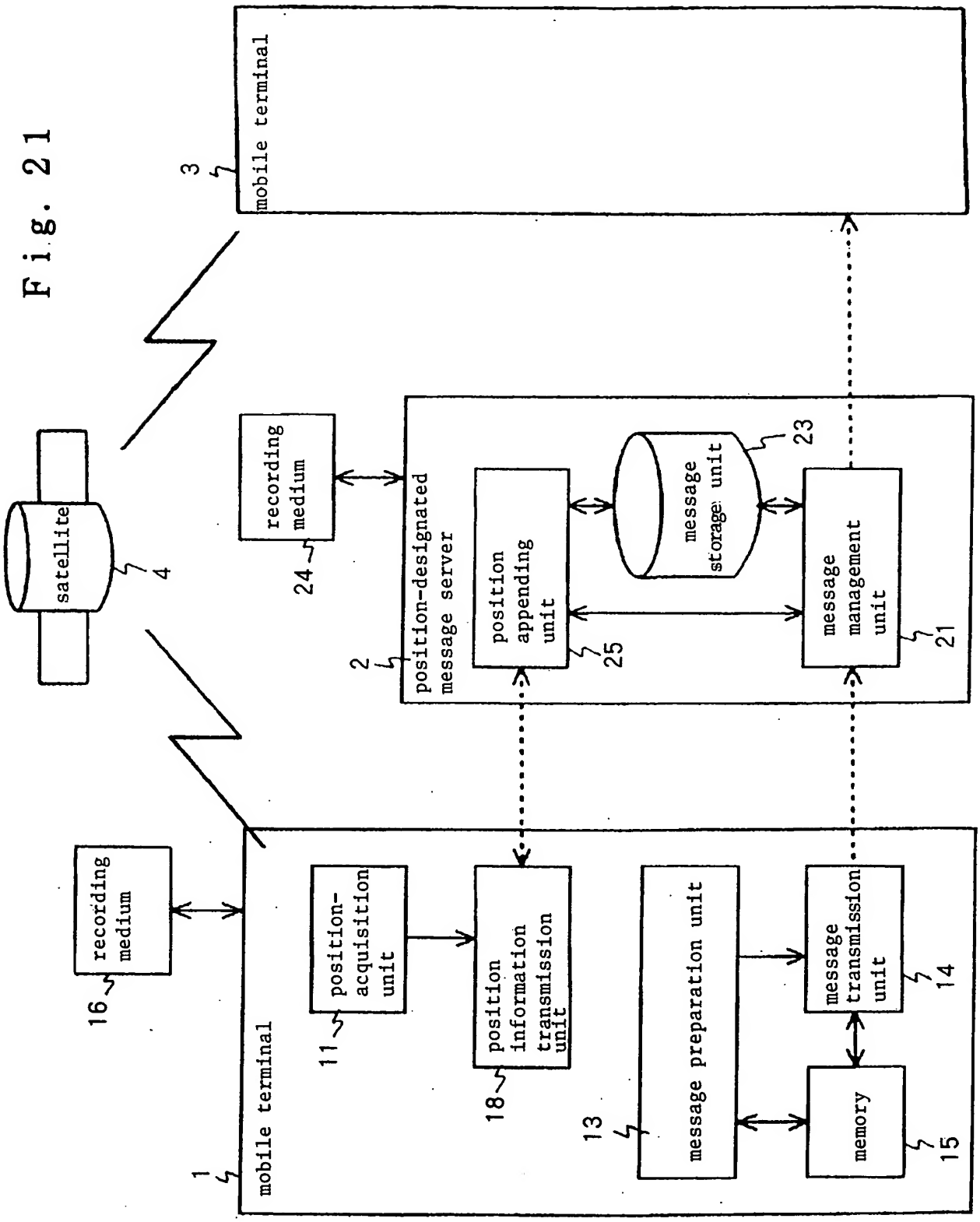

mobile terminal
3
satellite
4
recording medium
24
position-designated message server
2
position appending unit
25
message storage unit
23
message management unit
21
recording medium
16
mobile terminal
1
position-acquisition unit
11
position information transmission unit
18
message preparation unit
13
message transmission unit
14
memory
15

Fig. 22

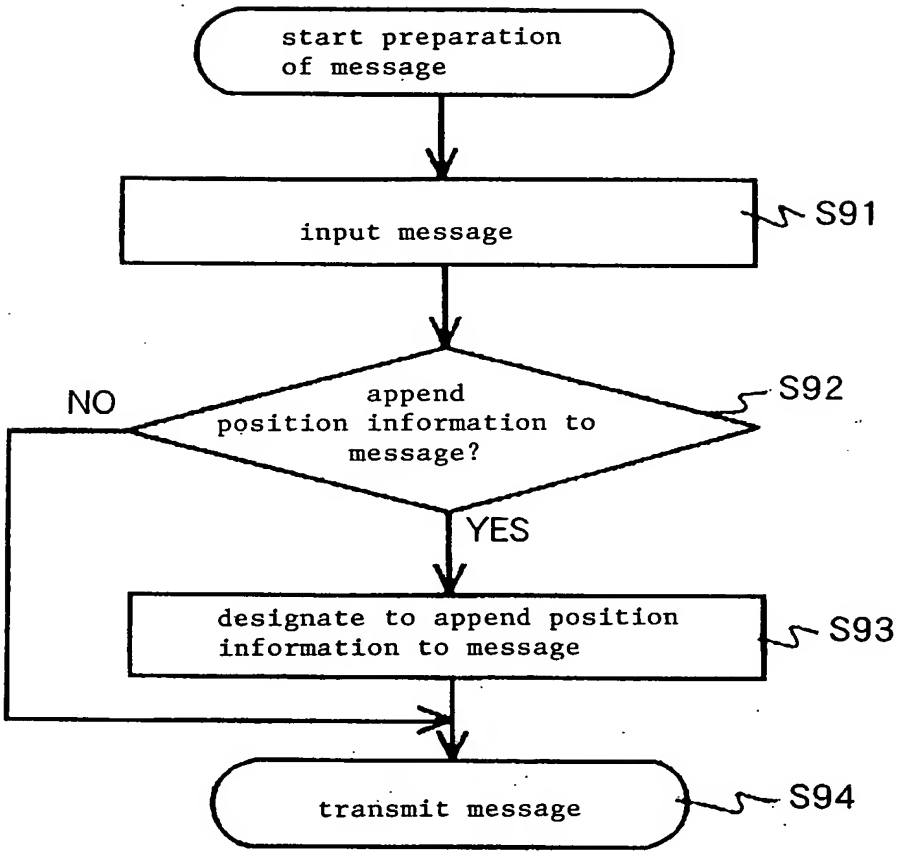

start preparation of message
input message
S91
append position information to message?
S92
NO
YES
designate to append position information to message
S93
transmit message
S94

Fig. 23

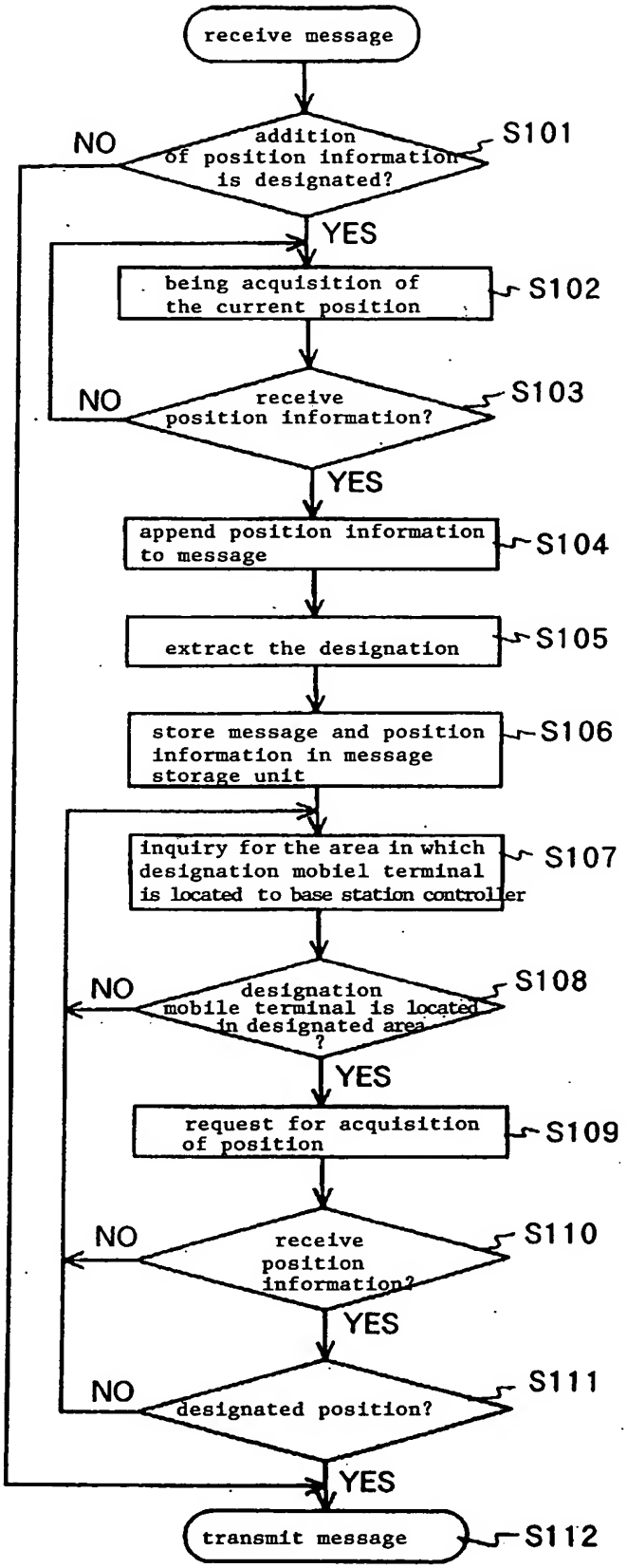

receive message
addition of position information is designated?
S101
NO
YES
being acquisition of the current position
S102
receive position information?
S103
NO
YES
append position information to message
S104
extract the designation
S105
store message and position information in message storage unit
S106
inquiry for the area in which designation mobiel terminal is located to base station controller
S107
designation mobile terminal is located in designated area ?
S108
NO
YES
request for acquisition of position
S109
receive position information?
S110
NO
YES
designated position?
S111
NO
YES
transmit message
S112

Fig. 24

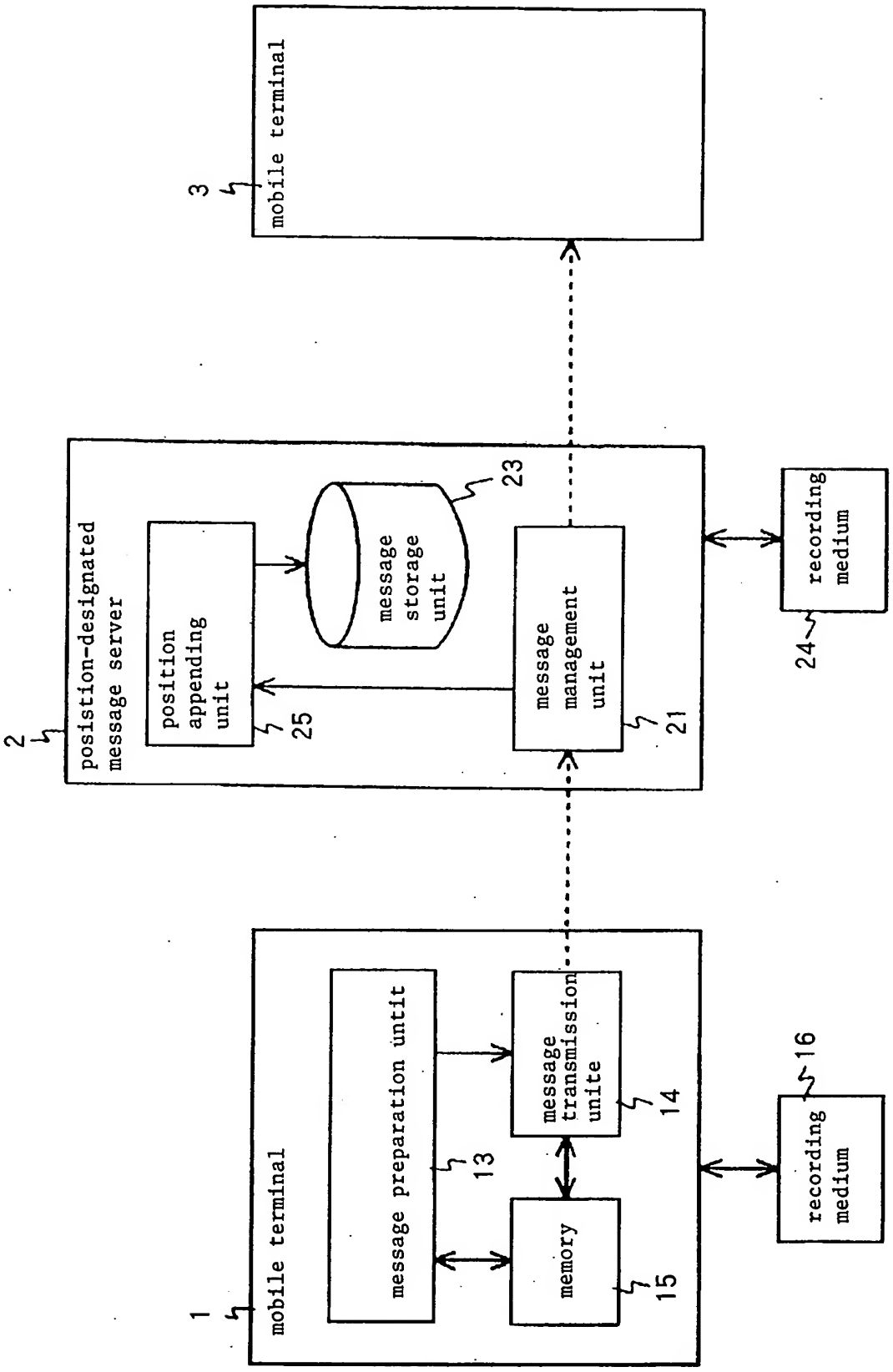
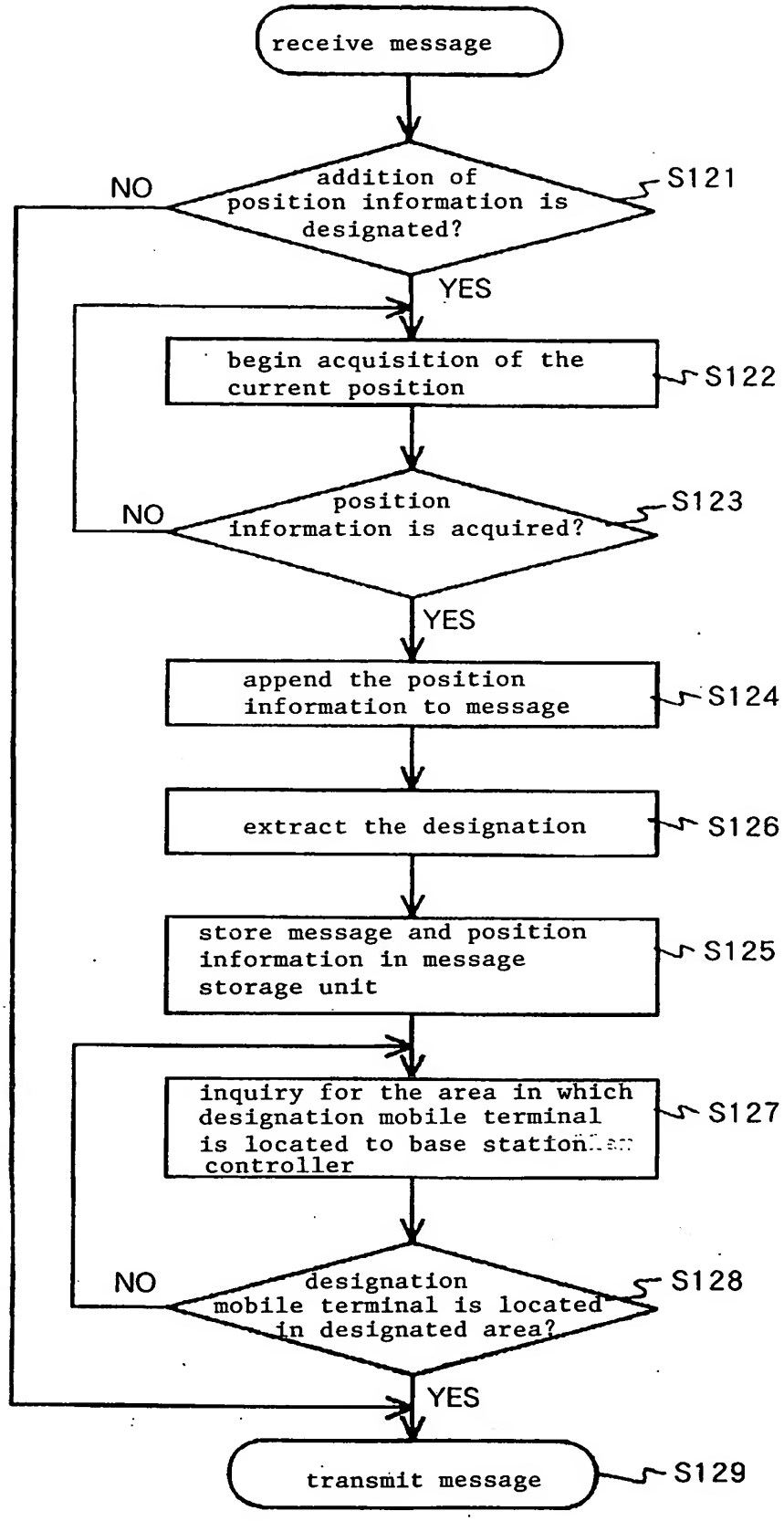

3
mobile terminal
2
posistion-designated message server
position appending unit
25
message storage unit
23
message management unit
21
recording medium
24
1
mobile terminal
message preparation untit
13
message transmission unite
14
memory
15
recording medium
16

Fig. 25


receive message
addition of position information is designated?
S121
NO
YES
begin acquisition of the current position
S122
position information is acquired?
S123
NO
YES
append the position information to message
S124
extract the designation
S126
store message and position information in message storage unit
S125
inquiry for the area in which designation mobile terminal is located to base station controller
S127
designation mobile terminal is located in designated area?
S128
NO
YES
transmit message
S129